### Requirement Management Plan Template

*The RMP template establishes an orderly method by which the goals of requirements management will be achieved. The plan also communicates essential information to project participants and helps newcomers get up to speed. Consequently, the plan is a living document, which needs to be updated and supplemented throughout its life. Refer to “Mastering Business Analysis Versatility” by Eugenia C. Schmidt, pages 186-189 for suggested adjustments based on different levels of organizational maturity.*

## **Requirement Management Plan (RMP)**

The purpose of requirement management is to establish a common understanding of how requirements will be addressed between the customer and project or organization, within the project or organization, and throughout the life cycle. The goals of requirements management are to ensure that requirements are controlled to establish a baseline for development, acquisition, or management; and to ensure that the plans, work products, and activities are consistent with the requirements.

1. Version Control

*[All documents should include some form of version history that includes version numbers, dates for the revision, why it was revised, and if there were any reviews or approvals.]*

1. Applicability to a Specific Project, Program, or Organization

*This requirement plan is needed for <this project, program, or organization> because…*

*The benefits of having this plan are…*

1. Target Audience for RMP

*[Describe those who need to review, approve, or agree to the content of the RMP. This may include project team members, vendors, other business analysts* (BAs)*, or any others that may be involved in the requirements management process.]*

1. Risks and Issues

*Project constraints pose these business analysis challenges…*

*The project approach impacts these business analysis activities….*

*Stakeholder risks in obtaining requirements are…*

1. *AS-IS* Requirement Processes

*[This section describes the approach to identifying, developing, maintaining, and managing requirements. Discuss inputs, processes, outputs, timing, entrance and exit criteria, events, and other information. Describe how participants will interface with each other.*

*Provide an overview of the processes relative to the life cycle; structure the processes or activities and phases by the model you are following (CMMI, PMP, etc.)**. This can be done graphically.]*

1. Documenting Requirements

*[Explain how requirements will be described and captured.]*

* 1. Requirement Attributes

*[Describe the information that will be associated with each requirement and establish who will be responsible for collecting the information.]*

*Example*:

| **Requirement Attribute** | **Use** | **Captured By** |
| --- | --- | --- |
| Change history | Change control and audit | Analyst |
| Unique ID | Traceability matrix | Analyst |
| Priority | Implementation planning | Assigned owner |
| Source | Traceability to requirement source | Analyst |
| Owner | Approver and decision maker | Analyst |
| Implementation complexity | Estimating and release planning | Designer |
| Status | Initial draft, validating, final review being performed by SME, approved for design | Analyst |
| Volatility | Scale of 1–5, where 5 is very likely to change during the project and may cause rework | SME |
| Acceptance criteria | Measurability and testability of the requirement | Analyst |

* 1. Requirement Written Structure

*[Use a consistent structure with sets of common verbiage to avoid subjective and ambiguous statements that may be interpreted differently based on the reader’s experience, culture, or natural language exposure.]*

*Examples*:

* + - 1. Use imperatives: these are words and phrases that are used with the requirement statement that command that something be provided:
         1. *Shall* use to dictate the provision of a functional capability.
         2. *Must* or *must not* use to establish business rules, constraints, or quality service requirements.
         3. *Are applicable* is used to reference standards or other documents
         4. *Will* is used to cite things that are operational
      2. Use continuances to introduce lower levels: below, as follows, following, listed, and supports.
      3. Use directives to point to an illustrative source: figure, table, for example, note
      4. Don’t use options since they will loosen the specification and establish a basis for trade-offs (lower-priority requirements)—examples not to use: can, may, optionally. Use the priority requirement attribute instead.
      5. Avoid weak words and phrases—examples: adequate, as a minimum, as applicable, easy, as appropriate, not limited to, if practical, normal, timely, good, nice, fast, quickly, real time, current, all, complete, approximately, excellent, flexible, many, maximize, robust, sometimes, user-friendly.
      6. Use consistent verbs in functional requirements and use cases—examples: access, analyze, answer, ask, adjust, allocate, allow, approve, assign, authenticate, authorize, benchmark, confirm, consult, calculate, calibrate, choose, classify, conduct, configure, decide, define, deliver, discover, display, distribute, eliminate, enter, evaluate, export, extend, find, forecast, format, identify, import, inform invoke, list, measure, merge, mobilize, monitor, notify, post, prepare, promote, provide, queue, query, record refresh, request, schedule, search, select, send, specify, stabilize, submit, synchronize, take, upgrade, validate, view.]
  1. Categorization, Numbering Convention

*[A hierarchical numbering scheme with no more than three levels and with the following prefixes should be used. Define code structure here.]*

*Example classifications and unique ID (partially follows BABOK® classification)*:

|  |  |  |
| --- | --- | --- |
| *Classification* | *Description* | *Unique Identification Code* |
| *Business requirements* | *Goals, objectives, benefits. Highest level from the business perspective.* | *BS999 (business requirements)* |
| *Stakeholder Requirements* | *Aligned to business requirements and from the perspective of those who interact with the system under discussion (current state) or those that will (future state). They can be in textual format, a described high-level process, a business capability, documented as a user story, or as a use case.* | *SR999 (textual stakeholder requirement)*  *US999 (user story)*  *UC999 (use case)*  *PR999 (process)*  *CP999 (capability)* |
| *Solution requirements* | *Aligned to stakeholder requirements and from the perspective of the system or solution—how the stakeholder requirements will be addressed. They can be further classified as design constraints, functional requirements (includes data requirements), quality attributes, data entities and attributes (data dictionary).* | *DC999 (design constraint)*  *FR999 (functional requirement)*  *NR999 (nonfunctional requirement)*  *QA999 (quality attribute)*  *DE999 (data entities)*  *EI999 (external interface)* |
| *Business rules* | *A specific directive under control of the business; may be aligned to a process (behavioral rule) or data entity (operational rule).* | *BR999 (business rule)* |

* 1. Reports

*[Requirement reporting may be necessary based on organizational needs, but also depends on the amount of control needed to manage requirement risks. For example, if this was a project that is very likely to change before completion, there may be a set of requirements that need to be tracked differently, reporting on their volatility (see requirement attributes). Requirement statistics can help project managers* (PMs) *assess the need to change the project approach.]*

*Example requirement reports:*

* *Traceability matrix—such as use cases and associated test cases*
* *Unallocated requirements*
* *Requirements by risk*
* *Requirements by priority*
* *Requirements by qualification method*
* *Requirements status*
* *Cumulative changes*
* *Requirements statistics (% of volatile, % within each priority, etc.)*

* 1. Requirements Deliverables
     1. Work Products

*[Work products are interim deliverables that do not get reviewed or approved. They are needed by the BA to conduct their analysis. They may be retained for individual future use as examples.]*

*Examples: interview notes, analysis databases, checklists, spreadsheets, prototype guidelines, tool evaluation worksheet, etc.*

* + 1. Formal Deliverables

*[Deliverables can be listed as shown in the following table, or a responsibility matrix could be created to show roles and responsibilities for each deliverable.]*

*Examples*:

|  |  |  |  |
| --- | --- | --- | --- |
| **Deliverable** | ***Description*** | ***Applicability/***  ***Responsibility*** | ***Reviews/***  ***Approvals*** |
| Business case | *The BA may be involved in the creation of the business case for larger initiatives that may take a significant investment from the enterprise. This would involve identifying initial business needs with associated benefits, costs, risks, and results assessments.* | *NA* |  |
| Project request, charter or project design document (PDD) | *In a more project-driven environment, you may have a formal way of defining and initiating projects. The PM and the sponsor would typically create this initiating document that defines the project scope and an initial understanding of solution scope.* | *The project charter was already created by the PM and includes a scope statement by the functional area BA.* | *Already approved.* |
| Scope definition statement | *Once a BA is assigned, a scope definition statement may either be included in the initiating document (such as the project charter) or can be a separate document to describe what is known regarding solution scope.* | *NA—included in project charter* |  |
| Business requirements definition or document (BRD) | *If there is a separation in organizations between the business and the delivery organization (such as IT, engineering, or an outside vendor), then there is typically a document that identifies requirements from the business and user or stakeholder’s perspective. This deliverable content can also be used for package evaluations. Use cases are a bridge between the BRD and SRS and can appear in either or both.* | *The BA from the functional organization will create this document* | *Approval from product owner required. Reviews to be conducted by functional area BA with sponsor, IT service delivery team, and QA team.* |
| System, software or solution requirements specification (SRS) | *For requirements to be effective enough to build a solution, you need to get to the solution requirement level that includes the functional and nonfunctional requirements. These are described in the SRS with the inclusion of models, diagrams, and tables that provide context around the requirements and further define them. Note that in some organizations the SRS is split between functional and nonfunctional deliverables.* | *The SRS will be created by the BA in the IT organization*. *Requirements must be aligned to business requirements and traced to test cases.* | *Approval from product owner and appropriate process owners. Reviews conducted by IT, BA, with IT service delivery team and QA team.* |
| Technical Specification Document (TSD) | *The solution needs to be further specified with careful consideration of nonfunctional requirements (especially constraints). Further definition focuses on the technological environment (infrastructure, databases, etc.). The BA may be involved in the creation of the more conceptual design of solution components before a more physical design is developed.* | *The TSD will be created by the systems analyst* | *Approval from architecture group and security group. Reviews by IT, BA, and QA team.* |
| Business analysis approach | *This deliverable plans the business analysis activities and associated techniques that will be used. Each project is unique. Depending on project size, complexity, risks, and volatility, the approach may vary. Therefore, it is necessary to collaborate with all those involved in these activities to ensure proper estimating based on solution ideas and a well-documented set of assumptions. A requirements management plan will likely be included with this approach document.* | *The BA in the functional organization and the BA in the IT organization will work together on an integrated business analysis approach.* | *Approved by PM. Created and agreed to by functional area BA and IT BA. Reviewed by project team.* |

1. Relevant Governance Processes and Procedures

*[Describe required procedures and other dependent processes that may affect the requirement management processes, such as: change control, organizational change management, enterprise architectural procedures, approval checkpoints, template use directives, etc.]*

1. Current Requirement Tools

*[Describe the tools that will be used for requirements. Tools may include commercial software packages for the requirements repository, computer-aided software engineering (CASE) tools, test tools, project planning tools, issue management tools, estimating tools, as well as non-automated tools such as diagrams and storyboards. If a tool has not been selected, provide the requirements for selecting it.]*

*Example*:

|  |  |  |
| --- | --- | --- |
| **Tool** | **Version** | **Use** |
| Requirement tracker | Custom built | To document work-in-progress requirement gathering, analysis, and reporting |
| Action tracker | Custom built | To document issues and actions (includes requirement issues) |
| MS project | MS product 20xx | To document requirement management tasks—requires integration with overall plan owned by the PM |

1. RMP Appendix
   1. Glossary of Terms
   2. Verification and Validation Methods
   3. Reviews

*Examples*:

* *Peer desk-check*
* *Round robin or pass-around*
* *Walk-through*

##### Example SRS walk-through review preparation checklist:

* Have clear objectives and a defined scope of the review
* Determine appropriate rate and timing (e.g., coverage of six pages per 30 minutes)
* Know your participants and their roles (author, moderator, reader, recorder)
  + Does everyone know each other?
  + Will the reporting structure of participants influence the ability to provide feedback?
  + Have roles been agreed to?
  + Who presents and for what purpose?
* Provide entry criteria (has been validated against standards, all issues documented with status, known defects documented with status, peer inspection completed, etc.)
  + Prepare a checklist that will help you define the exit criteria
  + Were all issues and risks addressed?
  + Expected deliverables completed? Who is responsible for updates and distribution?
  + Any impact to previously created and/or approved deliverables (rework)?
  + Action items listed and assigned?
* Pick the appropriate collaboration tool and approach
* List any considerations for dealing virtually and globally (time zones, language, etc.)
* Will cultural differences impact the ability to get feedback from all participants?
* Will there be any language barriers that will need to be addressed?
* What time of day is best, considering all participant time zones?
* Could a cultural liaison assist?
* Is there a team orientation package that can provide guidelines?

##### Distributed team review (virtual and global) considerations:

* Use the project charter for *shared goal* alignment
* Use a project’s team orientation package (TOP) for project procedural alignment and to establish common project guidelines (promotes fairness and a *shared culture*)
* Use the RMP for requirements processes and tools; use consistency with more effective requirement collaboration (*shared process*)
* Use the responsibility charts and swim lines to show touch points and roles within the process (*shared responsibility*)
* Give permission to all team members to question requirements through asynchronous means. Use tool features to collaborate and record sessions for replay (*enabling technology*)
* Use the following facilitation and collaboration techniques:
  + Round robin: allow each person to speak
  + Individualized opinion: ask a group for feedback where only you should get the reply
  + Silent brainstorming: everyone makes their own list silently; have one individual compile the information and then evaluate it as a group
  + Walk through templates and examples *before* reviews of final deliverables

*Example virtual review template*

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Objectives and Outcomes** | **Deadline for Completion** | **Scope of Discussion (priority order)** | **Participants and Role in Session** | **Entry and Exit Criteria** |
| *Review business rules for validation against audit requirements. Interpretation and final approval from compliance auditor and understanding of business rules from offshore liaison.* | *One week before design phase starts.*  *Four hours allocated for review.* | *Sarbanes Oxley*  *35 Rules*  *8m/rule* | *BA (author, moderator).*  *Compliance auditor (reader).*  *Offshore liaison (recorder).* | *Entry criteria: business rules reviewed by lead BA and all questions or issues provided to participants 24 hours before the review.*  *Exit criteria: requirement changes documented in matrix and SRS updated.* |
| **Follow-Up Meetings** | **Virtual/Global Needs** | **Medium** |  | **Additional Comments** |
| *Possible inclusion of lead developers.* | *Time of day—consider time zone differences.* | *WebEx* |  | *Offshore liaison is in the role of designer and also represents the developers.* |

* 1. Inspection Checklist

*Example requirement evaluation checklist:*

|  |
| --- |
| ***Evaluation Criteria*** |
| 1. *Is associated to a test case or other deliverable for validation and acceptance (testable and verifiable)* |
| 1. *Is understood by affected parties (e.g., SME, developers, testers) and intended for a global audience (reason why it is in natural language)* |
| 1. *Unacceptable words (jargon, abbreviations, acronyms), phrases, and vague terms (TBD) are absent (e.g., adverbs, adjectives, as appropriate, at a minimum)* |
| 1. *Adheres to defined terms in the requirements glossary* |
| 1. *Must be able to interpret it only one way—this is very difficult in natural language (unambiguous)* |
| 1. *Conforms to standard verbiage and format* |
| 1. *Appropriate level of detail for its position in the hierarchy* |
| 1. *Has the associated information required by the RMP* |
| 1. *Within scope as defined in the project charter* |
| 1. *Avoids specifying a design or solution* |
| 1. *Realistic within the constraints of the project* |
| 1. *Written in the imperative (shall)* |
| 1. *Cross-references are specific, so the information can be easily located; the reference is located in the project document library if it is external to the requirement* |
| 1. *Can be traced to its parent or driver* |
| 1. *Unrestrictive; it can be implemented by more than one solution or design* |
| 1. *Expressed in an active (not past tense) voice* |
| 1. *Multiple statements used to break down complex or compound statements* |
| 1. *Quality attributes are quantified* |

|  |
| --- |
| ***Evaluation Criteria—All Requirements*** |
| 1. *Consistent with each other* |
| 1. *Addresses each type of requirement (business, rules, external interfaces, etc.* |
| 1. *Most important attributes documented (status, volatility, etc.) based on type of project* |
| 1. *Address user interfaces* |
| 1. *Nonfunctional requirements are addressed* |
| 1. *Assumptions and dependencies for requirements are stated.* |
| 1. *Address system and user error conditions* |
| 1. *Trace to their parent or driver (no dropped traceability)* |
| 1. *Interfaces are specified (internal/external)* |
| 1. *Inputs and outputs are specified* |
| 1. *Organized for additional clarity and a good basis for design decisions* |

* 1. Templates

##### Examples:

##### Use Case Template (Fully Dressed)

Fully-Dressed Use Case Template

Use Case ID:

Name:

Primary Actor:

Secondary Actors:

Includes:

Pre-condition:

Post-condition:

Trigger (Optional):

Stakeholder Interest (Optional):

Basic Flow:

Extensions (Exceptions and Alternate Paths):

Assumptions: